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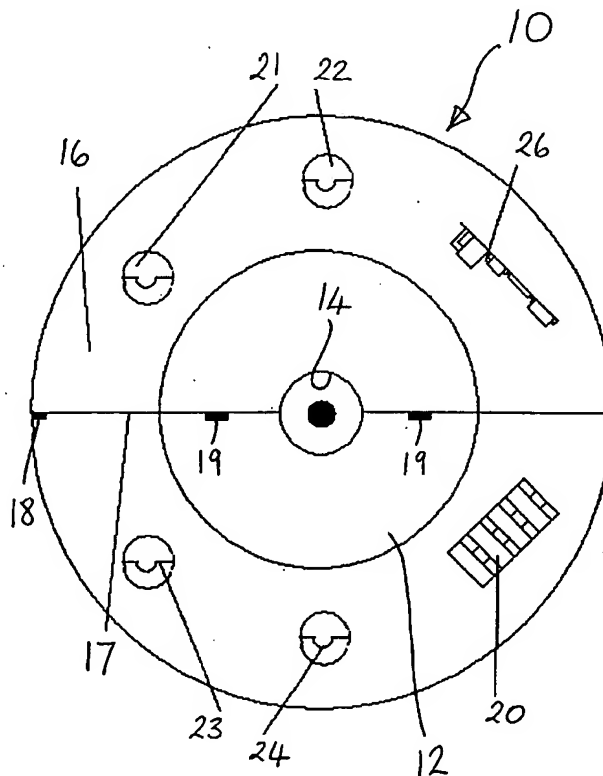
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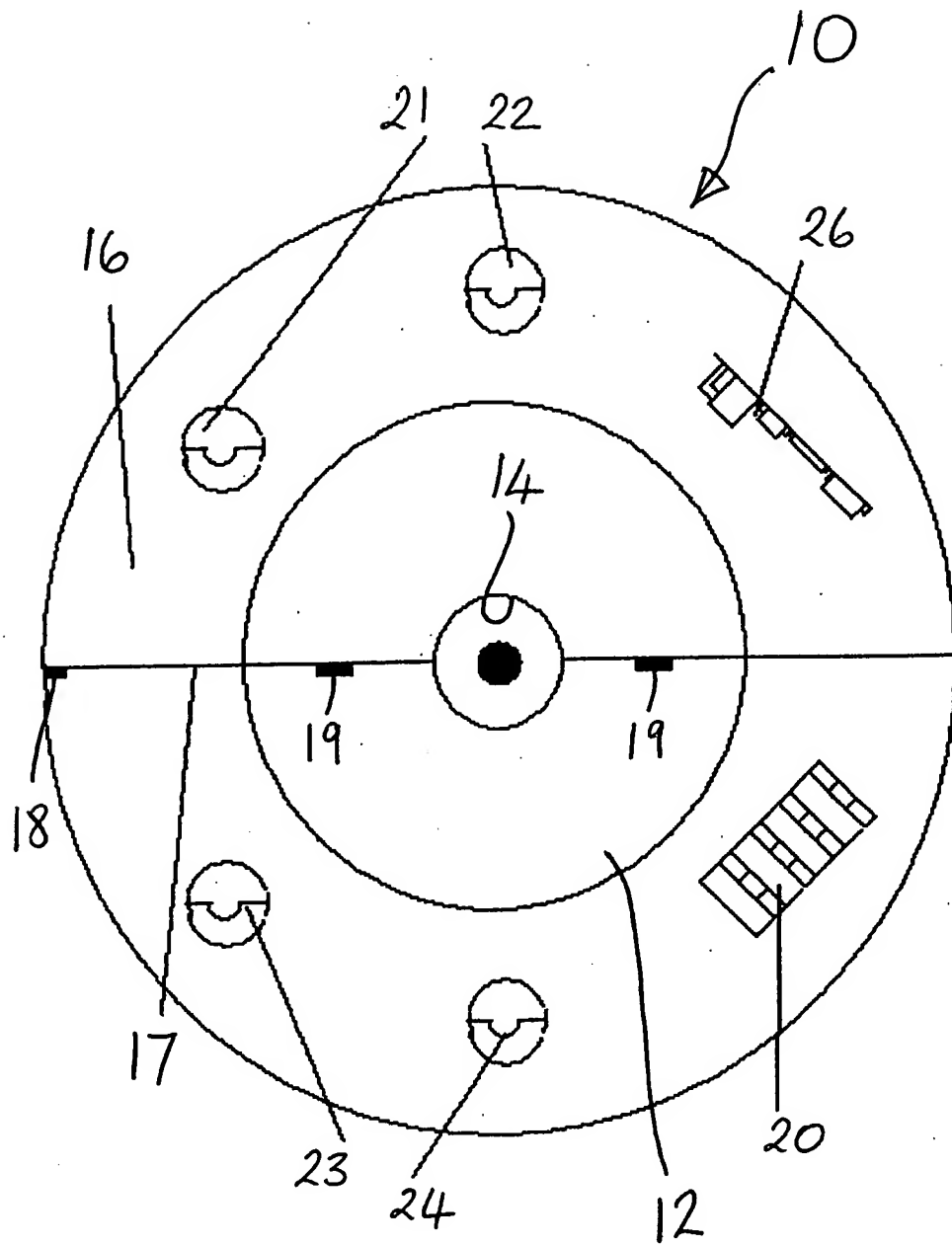
(58) Field of Search:
UK CL (Edition V) F4R
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(54) Abstract Title: **Emergency lighting fixture**

(57) A housing (10) suitable for mounting around an existing ceiling rose includes a translucent casing (16) containing a light source (21-24), and a battery (20) and other circuit components to provide for emergency lighting. The fixture is particularly suitable for the domestic market as it can be a simple retrofit to an existing lighting installation. In particular, the housing backplate (12) and casing (16) may be in two halves with snap fit interengagement means (19) for fitting around and behind an existing lighting installation.



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EMERGENCY LIGHTING FIXTURE

This invention concerns an emergency lighting fixture which is particularly, but not exclusively, suited for use in a domestic environment.

Typically, emergency light fixtures inside industrial or commercial premises or institutions such as hospitals or accommodation for elderly people comprise a box-like housing mounted on a wall or on a ceiling, quite separate from normal light fittings, and with a separate connection to mains wiring. Inside the housing there are one or more lamps for emergency use, which may be halogen lamps, which are connected to the mains power supply by way of a battery, battery charging means and associated circuit means. The lamp or lamps is/are mounted behind a transparent or translucent portion of the housing. While mains is operating, the battery is charged thereby and the lamp(s) is/are not operated. When mains power fails, battery power is switched to the lamp or lamps through a relay, diode or similar switching arrangement in the circuit means so as to illuminate an area surrounding the housing for a sufficient time to allow evacuation and/or repair of the mains power system.

Given the advantages of emergency lighting, the object of the invention is to make it more convenient to fit same in a domestic setting where people generally do not wish to have an unsightly large box-type housing mounted on a wall or ceiling.

With this object in view, the invention provides an emergency light fixture having the known features outlined above but which is characterised in that the housing is adapted in its configuration to at least partially surround a housing of a ceiling mounted connector of a type used for a domestic light fitting.

When the housing of the proposed fixture is mounted around an existing fitting in this way it is more acceptable as it does not give the impression of a separate item and is not unsightly. Equally important, however, is that a separate connection to mains power does not have to be made upon installation. The connection to mains can be made via the existing ceiling mounted connector which simplifies the installation of the new fixture.

Advantageously, the housing of the proposed fixture is annular or part-annular. Advantageously it has a part, such as a base plate which fits behind the existing connector housing for common mounting therewith. To accomplish this more easily, the fixture housing is advantageously formed as two mating parts.

The invention will be described further, by way of example, with reference to the accompanying drawing, in which the single figure is a diagrammatic plan view of a practical embodiment.

With reference to the Figure, the exemplary fixture comprises an annular housing 10, which is designed to fit around and behind an existing ceiling rose, which is installed as standard in the vast majority of domestic premises in the UK. This housing 10 comprises a circular backplate 12, having a central aperture 14 and mounted thereon an annular or toroidal casing 16 of translucent plastics material. The backplate 12 may be of opaque plastics or metal or any other suitable material.

Both the backplate 12 and the annular casing 16 are formed of two substantially equal halves which are hingedly connected at 18 and joined along line 17. The two halves of the back plate 12 are connectable by snap fit interengagement means 19, and the two halves of the casing 16 are joined when the back plate is joined.

Inside the annular casing 16, there are mounted four lamps 21-24, which may be halogen lamps, and may be of low voltage, e.g. 12v, 16v or even only 1.5v. Also mounted therein is a rechargeable nickel/cadmium battery 20, to which the lamps 21-24 are electrically connected, and a small circuit board 26 including a battery charger and an appropriate electronic switch means, also electrically connected to the battery and the lamps. The

circuit, which includes all these components, which are standard items, also has leads for connection to mains.

In use, the fixture housing 10 is offered up to a standard ceiling rose (not shown) which should have its front cover removed and be unfastened from the ceiling. The housing 10 is opened up, about hinge 18, along line 17 and is thereby positioned so that the casing 16 encircles the ceiling rose, with the central region of the backplate 12 fitting behind the ceiling rose. The central aperture 14 in the backplate 12 allows for the wires or cables which extend from the mains circuit behind the ceiling into the connector mounted inside the ceiling rose. The two part nature of the new fixture 10 allows for its fitting around these wires, without having to disconnect the ceiling rose and thread the wires through the backplate 12 for re-connection. The leads to connect the circuit inside the case 16 to mains are fed in to the rear of the ceiling rose, and both the backplate and the ceiling rose can then be secured to the ceiling by common fasteners, e.g. screws. The leads for the emergency lighting fixture are then connected to the ceiling rose connector, before the cover of same is refitted.

The emergency lighting then operates in conventional manner. Its battery 20 is charged by mains, but the lamps 21-24 are not operational until mains power fails, when the switch means on the board 26 complete the circuit for battery operation of the lamps 21, 24.

Variations in detail are possible in other embodiments within the scope of the invention. The housing of the fixture may be configured and constructed differently. It may not be annular. It may not include a backplate for fitting behind the ceiling rose. It may not be formed in two parts. These features are merely the preferred options for a satisfactory practical embodiment.

CLAIMS

1. An emergency lighting fixture comprising a housing, which is at least partially translucent, and mounted therein at least one light source, battery means and circuit means including a transformer connectable to mains to allow charging of the battery and switch means operable to enable the light source to be powered by the battery means when mains power supply fails, characterised in that the housing is adapted in its configuration to at least partially surround a housing of a ceiling mounted connector of a type used for a domestic light fitting.
2. A fixture according to claim 1 wherein the fixture housing includes a base plate adapted, in use, to fit behind the ceiling mounted connector and to be mounted there by means of common fasteners with the said connector.
3. A fixture according to claim 1 or 2 wherein the fixture housing is substantially annular or part-annular.
4. A fixture according to claim 1 or 2 wherein the fixture housing includes a translucent annular enclosure for the light source or sources, the battery means and the circuit means.

5. A fixture according to any preceding claim wherein the fixture housing is formed as two mating parts, which fit together so as to surround or partially surround the housing of the ceiling mounted connector.
6. A fixture according to claim 5 wherein the two parts are hingedly connected to each other.
7. A fixture according to claim 5 or 6 wherein the two parts have interengageable snap fit means whereby they are connectable to each other.
8. A fixture substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.



INVESTOR IN PEOPLE

Application No: GB 0228849.6
Claims searched: 1-8

Examiner: Colin Clarke
Date of search: 16 April 2003

Patents Act 1977 : Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
A		GB 2355605 A WHITECROFT

Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC^v:

F4R

Worldwide search of patent documents classified in the following areas of the IPC⁷:

F21S, F21V

The following online and other databases have been used in the preparation of this search report:

WPI, EPODOC, JAPIO